

Amendments to the Specification:

Please replace the paragraph beginning at page 5, line 18, with the following rewritten paragraph:

-- As shown in the exemplary spintronic device 200 of **Figure 2**, an injection contact 208 and a detection contact 210 are each positioned on a thin layer of silicide 206 overlying a silicon substrate 202. The thin ~~insulating~~ layer of silicide ~~can act as a thin insulating barrier in order to serve as a tunneling junction for~~ allows for the injection of spin-polarized carriers into the silicon substrate without significant loss of spin polarization. The silicon substrate can have a layer of carrier material 204, such as for example an n-well in a p-substrate as is known in the art. The injection and detection contacts 208, 210 can be made of a ferromagnetic metal, such as cobalt, nickel, or iron, and in this example have a common spin polarization that is parallel to the surface of the silicon substrate. The magnetization of each contact 208, 210 can depend on the thickness of the contact, as the crystal structure of the contact can provide for ferromagnetic spin orientation during deposition, for example. An external magnetic field also can be applied to each contact in order to program the spin orientation of that contact. In another embodiment, at least one additional metal layer can be used to provide for proper contact anisotropy. Each additional metal layer can be a thin film of a diamagnetic or antiferromagnetic metal, such as for example a layer of ruthenium (Ru). The additional layer(s) can be placed between the contact and the silicide layer, and/or on top of the contact, in order to provide for the proper spin orientation in the contact.--